

Claims

1. A display device for vehicles, characterized by comprising:
display means provided with an indicator that emits display light, and projects the display light to a projection member; and control means for making the display means display a road shape image indicating a shape of a road in front of a vehicle, and three-dimensional information of the road.

2. A display device for vehicles, characterized by comprising:
display means; and control means for making the display means display a road shape image indicating a shape of a road in front of a vehicle, and three-dimensional information of the road.

3. The display device for vehicles according to claim 1 or 2, characterized in that

the control means makes the display means display, as the three-dimensional information, a height difference index informing a height difference of the road.

4. The display device for vehicles according to claim 1 or 2, characterized in that

the control means makes the display means display, as the three-dimensional information, a slope index informing a horizontal slope of the road.

5. The display device for vehicles according to claim 1 or 2, characterized in that

the control means makes the display means display, as the three-dimensional information, a distance index indicting a distance of the road.

6. The display device for vehicles according to claim 5, characterized in that the distance index includes a plurality of lines of a uniform distance interval.

7. The display device for vehicles according to claim 1, characterized in that

the control means makes the display means display, as the three-dimensional information, a curvature index indicating a curvature of the road.

8. The display device for vehicles according to claim 1 or 2, characterized in that

when the curvature of the road is a predetermined setting value or larger or larger than the setting value, the control means makes the display means display, as the three-dimensional information, a curve warning display informing that the road is tightly curved.

9. The display device for vehicles according to claim 1 or 2, characterized in that

the road shape image includes a line indicating a width line of the road.

10. The display device for vehicles according to claim 1 or 2, characterized in that

the road shape image includes a line indicating a center line of the road.

11. The display device for vehicles according to claim 1 or 2, characterized in that

the control means applies a mapping process to a texture image on the road shape image.

12. The display device for vehicles according to claim 11, characterized in that

in the road shape image, the texture image varies in pattern density or color between a portion of a road shape in the vicinity of the vehicle, and a portion of the road shape at a distance from the vehicle.

13. The display device for vehicles according to claim 1, characterized in that

the control means makes the display means display the road shape image to overlay the road.

14. The display device for vehicles according to claim 1 or 2, characterized in that

the control means makes the display means display an own vehicle index indicating a position of the vehicle corresponding to the road shape image.

15. The display device for vehicles according to claim 14, characterized in that

when the own vehicle index is at a warning position, the control means makes the display means display a position warning display as the three-dimensional information.

16. The display device for vehicles according to claim 1 or 2, characterized in that

when the vehicle is at a warning position, the control means makes the display means display a position warning display as the three-dimensional information.

17. The display device for vehicles according to claim 15 or 16, characterized in that

the control means displays in color at least a portion of the road shape image as the position warning display.

18. The display device for vehicles according to claim 1 or 2, characterized in that

when the vehicle is driving at a speed requiring warning in consideration of the shape of the road in front of the vehicle, the control means makes the display means display a speed warning display as the three-dimensional information.

19. The display device for vehicles according to claim 1 or 2, characterized by comprising:

a storage section that stores the road shape image, and a display format and a display setting of the three-dimensional information; and operation means for changing the road shape image, and the display format and the display setting of the three-dimensional information.